

LISTING AND AMENDMENT OF THE CLAIMS

Claim 1 (currently amended). Apparatus for heat ablation of the internal wall of a hollow organ, which apparatus comprises;

a catheter having proximal and distal ends, and having at least one internal lumen;

a balloon located at the distal end of the catheter and attached to a said lumen,

whereby the balloon may be filled with a liquid from the proximal end of the catheter;

a supply of a liquid for filling the balloon via the said lumen;

a tuned microwave antenna located in the region of the balloon for radiating microwave energy at a predetermined frequency to heat the balloon to a temperature suitable for heat ablation of the hollow organ wall tissue;

a waveguide for supplying microwave energy to the microwave antenna;

a former to centralize the antenna; and

a temperature probe to measure the temperature of the balloon;

wherein the liquid has a dielectric constant of from 41 to 63 and a conductivity of from 1.0 Sm^{-1} to 1.5 Sm^{-1} at said frequency and 50° C.

Claim 2 (original). Apparatus as claimed in claim 1 wherein the liquid has a dielectric constant of from 47 to 57 at said frequency and 50 °C.

Claim 3 (currently amended). Apparatus as claimed in ~~either claim 1 or claim 2~~ wherein the liquid has a conductivity of from 1.1 to 1.35 Sm^{-1} at said frequency and 50°C.

Claim 4 (canceled).

Claim 5 (currently amended). Apparatus as claimed in ~~any one of the preceding claims~~ claim 1 wherein the balloon has a normal inflation diameter of from 16 to 22 mm.

Claim 6 (currently amended). Apparatus as claimed in ~~any one of the preceding claims~~ claim 1 wherein the temperature probe and the balloon contain no metal.

Claim 7 (original). Apparatus as claimed in claim 6, wherein the temperature probe comprises at least one optical fibre extending from the distal end to the proximal end of the tube.

Claim 8 (canceled).

Claim 9 (original). A process for heat ablation of the internal wall of a hollow organ of a patient, comprising the steps of; providing a catheter having proximal and distal ends and having at least one internal lumen wherein a balloon is located at the distal end of the catheter and is connected to a said lumen, the balloon surrounding a tuned microwave antenna and a temperature probe and wherein a waveguide for supplying microwave energy at a predetermined frequency to the microwave antenna is connected to the microwave antenna;
inserting the distal end of the catheter into the hollow organ;
positioning the catheter such that the balloon is adjacent to the area of the hollow organ requiring heat ablation;
filling the balloon via the said lumen with a liquid having a dielectric constant of from 47 to 57 and a conductivity of from 1.0 Sm^{-1} to 1.5 Sm^{-1} at said frequency and 50°C ;
supplying microwave energy via the waveguide to the microwave antenna to heat the balloon.

Claim 10 (original). A process as claimed in claim 9 comprising the further 35 steps of;
providing a means for controlling the power supplied to the microwave *antenna* in dependence upon the temperature sensed by the temperature probe; and
controlling the power supplied to the microwave antenna to ensure heat ablation of the hollow organ of the patient.

Claim 11 (canceled).